Department of Environmental Protection

Bureau of Land & Water Quality May 1999

EPA DMR QA Study #19 Update.

I have been informed that the EPA letter that will announce and give directions on how to participate in the next EPA DMR QA Study [Study #19] will be mailed to participants by the end of May. As you have been previously informed, this study and future studies will be different. The EPA's past contractor, ManTech will no longer be providing the samples. Instead, licensee's will be ordering their chemistry QA samples directly from the participating NIST approved commercial lab[s] of their choice at their own cost. The list of these participating labs is being finalized and information regarding them will be provided in the announcement. I would estimate that the total cost for the conventional DMR parameters will be at least several hundred dollars. Toxicity QA samples will be provided much as they have been in the past and apparently there will be no charge for these.

I will try to inform you of any new changes in this schedule. In the meantime, if you have questions regarding these studies, please call me at 287-7659.

[David Dodge]

For Practice

1. The purpose of an air-gap device is to:
   a. Put more oxygen in the waste in sewers to avoid odors
   b. Lessen vibration in pipes.
   c. Prevent cross connections between wastewater and potable water.
   d. Ventilate wet wells at pump stations

2. A BOD test was run using three dilutions of the same sample. Which dilution gives the most valid results?

	Samp. Vol.	Init. DO	Fin. DO	BOD
a.	3 mL	8.0 mg/L	6.7 mg/L	130 mg/L
b.	5 mL	7.9 mg/L	4.0 mg/L	234 mg/L
c.	8 mL	8.1 mg/L	0.9 mg/L	270 mg/L

3. If the return sludge rate does not change and the influent flow increases and BOD concentration remain constant, the F/M ratio in the aeration basin will most likely…
   a. Remain the same
   b. Increase
   c. Decrease
   d. Depend on the air temperature

4. If an operator has a stock solution of acid that is 10N and he mixes 200 mL of that acid with 800 mL of distilled water, what will the normality of the resulting solution be?
   a. 0.8N
   b. 0.2N
   c. 8.0N
   d. 2.0N

Certification News

Not to beat the dead horse, but… operators who renewed their certifications in March should

have received their notification of renewal letters by now. If you have an ***odd*** certificate number and you mailed your renewal form and check in and have not received a renewal confirmation and pocket certificate renewal card, please contact us as soon as possible. Any of you who were due for renewal but didn't file with us should have received a letter stating that your certificate was now inactive. If you paid your fee but were short on training hours, you should have received a letter to that effect. If you have an odd numbered certificate and you haven't heard from us, let us know immediately.

Spring Exam

By the time you read this, the Spring 1999 Operator Certification Exam will have been given and the tests will be at ABC for correction. As usual, we'll get the results out to you as soon as possible after we receive them. Good luck to all that took the test!

UPCOMING TRAINING COURSES

May 12, 1999 in Howland, ME, Hands on confined space entry and non-rescue entry - approved for 6.0 hours, sponsored by MRWA (207) 729-6569.

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May 20, 1999 in Bangor, ME, Troubleshooting WWTP Operations - approved for 6.0 hours, sponsored by JETCC (207) 767-2539.

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June 17, 1999 in Kennebunkport, ME, Hands on confined space entry and non-rescue entry - approved for 6.0 hours, sponsored by MRWA (207) 729-6569.

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June 25, 1999 in Bangor, ME, Collection System Blueprint Reading - approved for 4.0 hours, sponsored by MRWA (207) 729-6569.

Answers to *For Practice:*

1. c. An air-gap is the only acceptable method to prevent cross-connections between wastewater and potable water.

2. b. In sample A, the depletion of DO in the sample bottle is less than 2.0 mg/L indicating that there was not enough biological activity for a valid test. In sample C, the DO was depleted to less than 1.0 mg/L. There might not have been enough DO available to complete the biological reduction of the organic material in the wastewater.

3. b. The F/M ratio is the ratio of the pounds of food to the pounds of microorganisms. If more flow having the same BOD concentration comes into the plant, the plant will receive more pounds of BOD. If the return sludge rate remains constant, there will be more food for the same amount of sludge. Thus, the F/M ratio increases

4. d. The normality of the final solution is given by (Volume of Acid X Normality of Acid)/Total Volume. Normality of Solution = (200 mL X 10N)/(200mL + 800mL) = 2.0N